

## Elective Description

**Campus:** (ALL) Grand Forks

**Elective/Experience Title:** Online Environmental Health

**Location of Elective:** Online

**Department:** Population Health

**Course Number:** PH 9502

**Preceptor(s):** Amber Lyon-Colbert, PhD, MS

**Period(s) Offered:**

**Number of students per period:** No limit

**Course Prerequisites:**

**Revised Curriculum Phase(s):**

**Purpose:** This course explores historic global environmental disasters, and policy while examining exposure assessment and epidemiologic study designs commonly used in environmental health in order to characterize the impact of environmental exposures on population health and our environment. It provides an overview of the major pollutants including their detection, impact on health, and principles of remediation. Ethical issues related to environmental health are discussed.

**Objectives:** Following successful completion of this elective, the student will be able to:

1. Apply epidemiological methods to the breadth of settings and situations in public health practice. (SMHS MD competencies 1.9, 2.8)
2. Explain effects of environmental factors on a population's health. (SMHS MD competencies 1.9, 2.8)
3. Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community, and societal levels. (SMHS MD competencies 2.8, 2.9, 2.10)
4. Explain biological and genetic factors that affect a population's health. (SMHS MD competencies 1.9, 2.2, 2.8)
5. Explain an ecological perspective on the connections among human health, animal health, and ecosystem health (e.g. One Health). (SMHS MD competencies 1.9)

**Instructional Activities:** During this elective, the student will be involved in/experience:

1. **Assigned Readings.**
2. **Journal article critiques:** Two environmental journal articles have been assigned to be read and critiqued. These will be due in week 2 and 4.
3. **Weekly Discussion Posts:** There will be 4 weekly discussion posts (Introduction + 3 weekly content posts).
4. **Disaster Preparedness Certificate:** FEMA, An Introduction to the Incident Command System (ICS):

<https://emilms.fema.gov/IS0100c/groups/133.html>

Student registration for FEMA SID: <https://cdp.dhs.gov/femasid/register>

5. **Superfund Paper/Presentation:** Students will identify a U.S. EPA superfund site and describe the contaminant, the affected population, the clean-up process and outcome. They will explain the effects of the identified contaminant on population health outcomes.  
[https://www.epa.gov/superfund/superfund-site-assessment-process;](https://www.epa.gov/superfund/superfund-site-assessment-process)  
<https://cumulis.epa.gov/supercpad/cursites/srchsites.cfm>
  
6. **Final exam:** There will be a final exam in this course. It will be cumulative and include all topics (comprehensive) covered during the session weeks 1-4. The exam will be administered through Blackboard and will be a 2-hour timed exercise that can be completed at any point during the final exam week.

**Criteria for Grading:** During and following this elective, the preceptor will:

1. Utilize the standardized UNDSMHS senior virtual elective evaluation form.
  
2. Evaluate by direct review of written work, discussion posts, Journal Critiques, superfund paper/presentation and performance on the final exam the student's achievement on objectives 1-5

#### GRADING BREAKDOWN

Activity	Points Possible	Percentage
Journal Article Critiques (2)	60	14.3%
Discussions (4)	60	14.3%
Disaster Preparedness ICS Certificate	50	12%
Superfund Paper	100	23.8%
Superfund Presentation	50	12%
Final Exam	100	23.8%
<b>Total</b>	<b>420</b>	<b>100%</b>

Passing Grade  $\geq 70\%$